

ABSTRACT

Acetogenins isolated from *Annona muricata* of the family Annonaceae are described. The substantially pure compounds of the invention exhibit to human tumor cell lines as well as selective cytotoxicity for various human tumor cell lines.

| Year | Age | Sex | Height | Weight | Body Fat | Heart Rate | Max. Heart Rate | VO ₂ Max | VO ₂ Rest | VO ₂ Max/Weight | VO ₂ Rest/Weight |
|------|-----|-----|--------|--------|----------|------------|-----------------|---------------------|----------------------|----------------------------|-----------------------------|
| 1980 | 20 | M | 175 | 70 | 12 | 120 | 180 | 3.5 | 1.2 | 21.4 | 7.1 |
| 1981 | 21 | M | 178 | 75 | 13 | 125 | 185 | 3.6 | 1.3 | 22.2 | 7.4 |
| 1982 | 22 | M | 180 | 80 | 14 | 130 | 190 | 3.7 | 1.4 | 23.1 | 7.7 |
| 1983 | 23 | M | 182 | 85 | 15 | 135 | 195 | 3.8 | 1.5 | 23.9 | 8.0 |
| 1984 | 24 | M | 185 | 90 | 16 | 140 | 200 | 3.9 | 1.6 | 24.7 | 8.3 |
| 1985 | 25 | M | 188 | 95 | 17 | 145 | 205 | 4.0 | 1.7 | 25.5 | 8.6 |
| 1986 | 26 | M | 190 | 100 | 18 | 150 | 210 | 4.1 | 1.8 | 26.3 | 8.9 |
| 1987 | 27 | M | 192 | 105 | 19 | 155 | 215 | 4.2 | 1.9 | 27.1 | 9.2 |
| 1988 | 28 | M | 195 | 110 | 20 | 160 | 220 | 4.3 | 2.0 | 27.9 | 9.5 |
| 1989 | 29 | M | 198 | 115 | 21 | 165 | 225 | 4.4 | 2.1 | 28.7 | 9.8 |
| 1990 | 30 | M | 200 | 120 | 22 | 170 | 230 | 4.5 | 2.2 | 29.5 | 10.1 |
| 1991 | 31 | M | 202 | 125 | 23 | 175 | 235 | 4.6 | 2.3 | 30.3 | 10.4 |
| 1992 | 32 | M | 205 | 130 | 24 | 180 | 240 | 4.7 | 2.4 | 31.1 | 10.7 |
| 1993 | 33 | M | 208 | 135 | 25 | 185 | 245 | 4.8 | 2.5 | 31.9 | 11.0 |
| 1994 | 34 | M | 210 | 140 | 26 | 190 | 250 | 4.9 | 2.6 | 32.7 | 11.3 |
| 1995 | 35 | M | 212 | 145 | 27 | 195 | 255 | 5.0 | 2.7 | 33.5 | 11.6 |
| 1996 | 36 | M | 215 | 150 | 28 | 200 | 260 | 5.1 | 2.8 | 34.3 | 11.9 |
| 1997 | 37 | M | 218 | 155 | 29 | 205 | 265 | 5.2 | 2.9 | 35.1 | 12.2 |
| 1998 | 38 | M | 220 | 160 | 30 | 210 | 270 | 5.3 | 3.0 | 35.9 | 12.5 |
| 1999 | 39 | M | 222 | 165 | 31 | 215 | 275 | 5.4 | 3.1 | 36.7 | 12.8 |
| 2000 | 40 | M | 225 | 170 | 32 | 220 | 280 | 5.5 | 3.2 | 37.5 | 13.1 |
| 2001 | 41 | M | 228 | 175 | 33 | 225 | 285 | 5.6 | 3.3 | 38.3 | 13.4 |
| 2002 | 42 | M | 230 | 180 | 34 | 230 | 290 | 5.7 | 3.4 | 39.1 | 13.7 |
| 2003 | 43 | M | 232 | 185 | 35 | 235 | 295 | 5.8 | 3.5 | 39.9 | 14.0 |
| 2004 | 44 | M | 235 | 190 | 36 | 240 | 300 | 5.9 | 3.6 | 40.7 | 14.3 |
| 2005 | 45 | M | 238 | 195 | 37 | 245 | 305 | 6.0 | 3.7 | 41.5 | 14.6 |
| 2006 | 46 | M | 240 | 200 | 38 | 250 | 310 | 6.1 | 3.8 | 42.3 | 14.9 |
| 2007 | 47 | M | 242 | 205 | 39 | 255 | 315 | 6.2 | 3.9 | 43.1 | 15.2 |
| 2008 | 48 | M | 245 | 210 | 40 | 260 | 320 | 6.3 | 4.0 | 43.9 | 15.5 |
| 2009 | 49 | M | 248 | 215 | 41 | 265 | 325 | 6.4 | 4.1 | 44.7 | 15.8 |
| 2010 | 50 | M | 250 | 220 | 42 | 270 | 330 | 6.5 | 4.2 | 45.5 | 16.1 |
| 2011 | 51 | M | 252 | 225 | 43 | 275 | 335 | 6.6 | 4.3 | 46.3 | 16.4 |
| 2012 | 52 | M | 255 | 230 | 44 | 280 | 340 | 6.7 | 4.4 | 47.1 | 16.7 |
| 2013 | 53 | M | 258 | 235 | 45 | 285 | 345 | 6.8 | 4.5 | 47.9 | 17.0 |
| 2014 | 54 | M | 260 | 240 | 46 | 290 | 350 | 6.9 | 4.6 | 48.7 | 17.3 |
| 2015 | | | | | | | | | | | |